Introduction to the Course: Automotive Electronics

by

Dr. Mahadev S. Patil
Professor

Rajarambapu Institute of Technology, Islampur, Maharashtra, India

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About Us

- Teaching experience: 27 Years –Undergraduate and Postgraduate courses in Automotive Electronics, Embedded Systems, Sensors & Actuators
- Academic background in Power Electronics and Automotive Engineering
- Research interests: Automotive electronics, electric vehicles (EVs), embedded systems, vehicle control systems, and intelligent transportation systems

Course Overview

- **Automotive Electronics**

This course provides automotive electronics used in vehicles. Automotive electronics encompasses a wide variety of devices and systems. Sensors, actuators, battery are the heart of any automotive electronics application. This course deals with overview of components and working of vehicle electronics point of view.

- **Learning Objectives:**

After completing the course, learners will be able to:

- Draw section blocks of automotive electronics systems.
- Interpret Components of automotive electronics systems.
- Develop microcontroller based automotive electronics system.
- Describe safety and comfort features of automobile.
- Explain effect of automotive technology on environment and society.

Course Outline

- **Course Content:**
  - Introduction to Automotive Systems
  - Sensors and Actuators
  - Battery & Charging
  - Ignition and Lighting
  - Modern Automotive Systems
  - Comfort & Safety
- **Course Duration**
  - 12 weeks
- **Credits:02**

Significance of Course

- **For Students**
- Builds strong fundamentals in automotive technology
- **For Academic Programme**
- Complements core automotive and electronics courses
- **For Employability & Placement**
- Enhances job readiness for automotive and EV industries
- **For Society & SDGs**
- Encourages sustainable mobility and cleaner transportation

Student engagement activities

- Weekly online quizzes and self-assessment tests
- Assignments based on real automotive case studies
- Discussion forums and peer interaction
- Mini projects on automotive subsystems
- Virtual labs and simulation-based activities
- Industry-oriented problem-solving exercises

Assessment Plan

- **Assessment Weightage**
- Assignments: 15%
- Quizzes: 15%
- Unit Tests:30%
- Final examination: 50%
- **Summative Assessment Methods**
- End Semester Examination
- **Course Completion Criteria**
- Minimum 40% overall score

Contact Details

- Dr. Mahadev S. Patil
- Contact:9420796900
- Email id- mahadev.patil@ritindia.edu